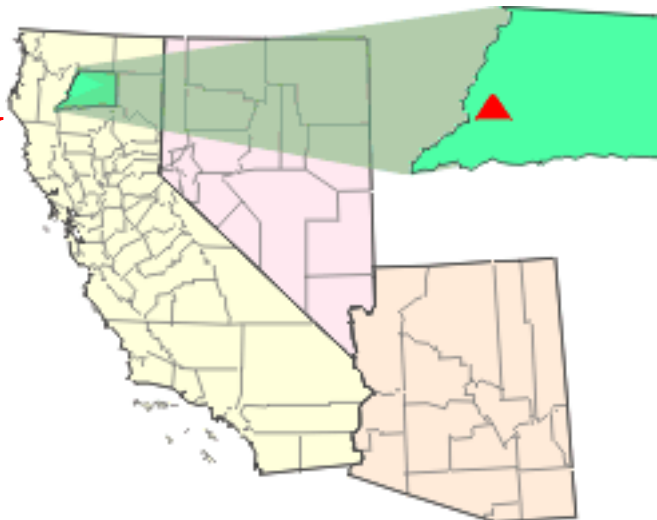


IRON MOUNTAIN MINE

CALIFORNIA

EPA ID#

CAD980498612



EPA

Region 9

**City: 9 miles
northwest of
Redding**

County: Shasta

Other Names:

[Click here for interactive site area map](#)

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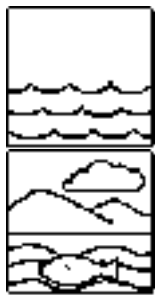
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▼ SITE DESCRIPTION AND HISTORY

Description: From the 1860s through 1963, the 4,400-acre Iron Mountain Mine (IMM) site periodically was mined for iron, silver, gold, copper, zinc, and pyrite. Though mining operations were discontinued in 1963, underground mine workings, waste rock dumps, piles of mine tailings, and an open mine pit still remain at the site. Historic mining activity at IMM has fractured the mountain, exposing minerals in the mountain to surface water, rain water, and oxygen. When pyrite is exposed to moisture and oxygen, sulfuric acid forms. This sulfuric acid runs through the mountain and leaches out copper, cadmium, zinc, and other heavy metals. This acid flows out of the seeps and portals of the mine. Much of the acidic mine drainage ultimately is channeled into the Spring Creek Reservoir by creeks surrounding IMM. The Bureau of Reclamation periodically releases the stored acid mine drainage into Keswick Reservoir. Planned releases are timed to coincide with the presence of diluting releases of water from Shasta Dam. On occasion, uncontrolled spills and excessive waste releases have occurred when Spring Creek Reservoir reached capacity. Without sufficient dilution, this results in the release of harmful quantities of heavy metals into the Sacramento River. Approximately 70,000 people use surface water within 3 miles as their source of drinking water. The low pH level and the heavy metal contamination from the mine have caused the virtual elimination of aquatic life in sections of Slickrock Creek, Boulder Creek, and Spring Creek. Since 1940, high levels of contamination in the Sacramento River have caused numerous fish kills. The continuous release of metals from IMM has contributed to a steady decline in the fisheries population in the Sacramento River. In 1989, the National Marine Fisheries Service took emergency action to list the Winter Run Chinook Salmon as threatened under the Endangered Species Act and to designate the Sacramento River from Red Bluff Diversion Dam to Keswick Dam as a critical habitat. In January 1994, the National Marine Fisheries Services issued its final rule reclassifying the Winter Run Chinook Salmon as an endangered species.

Site Responsibility:	NPL LISTING HISTORY
This site is being addressed through Federal and potentially responsible parties' actions.	Proposed Date: 12/30/82
	Final Date: 09/08/83
	Deleted Date:

▼ THREATS AND CONTAMINANTS



Surface water has been contaminated by the release of sulfuric acid, copper, zinc, and cadmium from the mine. People face a health risk if they accidentally ingest or come into direct contact with mine drainage. There is a potential for accumulation of contaminants in fish. The unplanned release of contaminants acutely toxic to aquatic life has contributed to the steady decline in fish populations and has contributed to the listing of the Winter Run Chinook Salmon as an endangered species.

▼ CLEANUP APPROACH

This site is being addressed in six stages: emergency actions and five long-term remedial phases focusing on water management, and cleanup of major sources in Boulder Creek, the Old Mine/No. 8 Mine, area source AMD discharges and sediments.

▼ Response Action Status



Emergency Actions: A lime neutralization process was installed at the site to treat acid mine discharge from the Richmond Portal prior to discharge to the reservoir. This system was operated by the EPA during the winter rainy season of 1988 until 1989. Rhone- Poulenc, Inc., a potentially responsible party, operated a similar system during the 1989 to 1990, 1990 to 1991, 1991 to 1992, 1992 to 1993, and 1993 to 1994 rainy seasons.



Water Management: In late 1986, the EPA selected cleanup remedies addressing several parts of the Water Management area. Cleanup activities include: capping selected cracked and caved ground areas; diverting clean Upper Slickrock Creek water around waste rock and mine tailing piles; diverting Upper Spring Creek; diverting clean surface water in South Fork Spring Creek to Rock Creek; enlarging the Spring Creek debris dam; and performing hydrogeologic studies and field-scale pilot demonstrations to better define the feasibility of controlling acid mine drainage formation. The studies and pilot demonstrations were completed. In 1989, the EPA completed capping cracked and caved ground areas and the open pit mine on Iron Mountain. The EPA completed the diversion of Slick Rock Creek in early 1990. Rhone-Poulenc completed construction of the Upper Spring Creek diversion in early 1991. EPA has not yet constructed two of the actions, the South fork of Spring Creek Diversion and the enlargement of the Spring Creek Debris Dam. EPA has proposed an alternate treatment approach that may reduce the need for these water management actions.



Boulder Creek: The EPA has studied the nature and extent of contamination in the Boulder Creek Watershed. In late 1992, the EPA selected an interim remedy to treat the acid mine drainage discharges from the Richmond and Lawson tunnels by constructing a treatment plant. The treatment plant has been built and is operating. Treatment will continue, until an alternate remedy could be developed to recover metals or control the discharges, to assure meeting all cleanup goals.



Old Mine/No. 8 Mine: The EPA has studied the nature and extent of contamination that discharges from the mine seep that originates from the Old Mine and No. 8 Mine. In the fall of 1993, the EPA selected an interim cleanup remedy, which included collecting and treating the acid mine drainage discharges. A treatment system has been built and is in operation.



Area Source AMD Discharges: Over the past three years EPA has studied of the nature and extent of the area source AMD discharges from the Boulder Creek and Slickrock Creek drainages at IMM. In May 1996, EPA proposed to perform treatment of the contaminated Slickrock Creek flows to establish significant additional control of the IMM AMD discharges. EPA is continuing to study potential remedial approaches for the area source AMD discharges from the Boulder Creek drainage, and may amend the interim treatment remedy for the discharges is a superior remedy is developed.



Sediments: In addition to the activities listed above, the EPA is studying the nature and extent of contamination associated with sediments. At the conclusion of the study, recommendations for the sediments cleanup remedies will be made.

Site Facts: In 1989, the EPA ordered the potentially responsible parties to implement emergency response corrective measures to remove the metal contamination. In 1990, the EPA, under an Administrative Order, required the parties to implement the Upper Spring Creek diversion cleanup action. In 1991, the EPA ordered the potentially responsible parties to assume responsibility for operation and maintenance of the completed cleanup actions. In 1992, the EPA ordered the potentially responsible parties to construct the treatment system for the Boulder Creek Watershed. In 1993, the EPA ordered potentially responsible parties to implement the collection and treatment system for the acid mine drainage discharges at the Old Mine/No. 8 Mine

▼ ENVIRONMENTAL PROGRESS



The installation and operation of the full scale neutralization system, the capping of areas of the mine, and the diversion of Slickrock Creek have significantly reduced the acid and metal contamination in surface water at the Iron Mountain Mine site. Cleanup activities are continuing and additional studies are taking place. The diversion of Upper Spring Creek has greatly increased the ability of the EPA and the Bureau of Reclamation to manage the continuing release of contaminants from the site to minimize harm to the Sacramento River ecosystem until a final remedy can be selected and implemented.

▼ POTENTIALLY RESPONSIBLE PARTIES

Potentially responsible parties (PRPs) refers to companies that are potentially responsible for generating, transporting, or disposing of the hazardous waste found at the site.

Online information about the PRPs for the site is not yet available.

▼ SITE DOCUMENTS AND REPORTS

Administrative Records: [September 1997 Record of Decision \(part 1\)](#), [\(part 2\)](#), [\(part 3\)](#), [\(part 4\)](#), [\(part 5\)](#)

Records of Decision: Online versions not yet available

Technical Documents:

▼ COMMUNITY INVOLVEMENT

Public Meetings:

Newsletters and Fact Sheets: 1) [Oct. 2000 - Proposed \\$862 Million Settlement to Pay for Iron Mountain Mine Cleanup](#)

▼ SITE REPOSITORIES/LIBRARY SOURCES



The public information repositories for the site are at the following locations:

Shasta County Library,
1855 Shasta Street,
Redding, CA 96001

The most complete collection of documents is the official EPA site file, maintained at the following location:

Superfund Records Center
Mail Stop SFD-7C
95 Hawthorne Street, Room 403
San Francisco, CA 94105
(415) 536-2000

Enter main lobby of 75 Hawthorne street, go to 4th floor of South Wing Annex.

▼ CONTACTS

EPA SITE MANAGER:

Richard Sugarek

ADDRESS:

PHONE NUMBER:

(415) 744-2226

E-MAIL ADDRESS:

sugarek.richard@epa.gov

**EPA COMMUNITY
INVOLVEMENT
COORDINATOR:**

David Cooper

ADDRESS:

PHONE NUMBER: 1-800-231-3075

E-MAIL ADDRESS:

PUBLIC INFORMATION CENTER: (415) 947-8701

E-MAIL ADDRESS: r9.info@epamail.epa.gov

STATE CONTACT:

ADDRESS:

PHONE NUMBER:

PRP CONTACT:

ADDRESS:

PHONE NUMBER:

COMMUNITY CONTACT:

ADDRESS:

PHONE NUMBER:

**After Hours (Emergency Response)
State Environmental Protection Agency
(800) 852-7550**

**US Environmental Protection Agency
(800) 424-8802**

▼ MISCELLANEOUS INFORMATION

STATE:	CA
CONGRESSIONAL DISTRICT:	02
EPA ORGANIZATION:	SFD-7-2